

App. # 10 / 827,021 (filed 04 / 19 / 2004)  
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The Robinson patent and the combination of this patent and the Markese mutual fund ranking methodology deal with determining the optimal portfolio of stocks to meet the investor's objective of highest return, given user-selected constraints / limitations and risk tolerance. The rating given a stock by the OPERRA does not deal with the objectives, constraints or risk tolerance of the user (investor).

With the Robinson system of producing the maximum portfolio of securities (both the best stocks and the optimal weighting of each), candidate stocks are defined via the various characteristics most important to the user (investor). Such characteristics may be ratios and financial measures provided by a data source such as Value Line. And the stocks are subjected to linear programming by Robinson to arrive at the user's maximum portfolio. OPERRA does not use any ratios or financial metrics from an outside source; all OPERRA ratios and metrics are internally generated. The Markese article covers the various ranking techniques for mutual funds and shows their benefits and pitfalls. OPERRA does not produce or rank portfolios.

OPERRA evaluates individual stocks and gives each an overall score / rank but is designed to produce an optimal portfolio either respect to the stocks selected or any weightings. With OPERRA, the user does not identify desired aspects of his portfolio; rather each holding or security is scored individually without user preferences. This OPERRA scoring is not based on its potential contribution in optimizing a portfolio given characteristics sought by a user.

In a deriving a score for holding or security, OPERRA uses the terms "portfolio" and "background portfolio" not to refer to a portfolio produced by the OPEPRA process; rather "portfolio" and "background portfolio" are a pre-selected group of stocks used, collectively, as the standard against which a holding of security is measured and ranked in derive its (overall) score. The past financial performance and fundamental strength of each holding is compared that of other holding in the portfolio.

For example, the OPERRA portfolio may be firms in the S&P 500 (without respect to weightings) and used as a standard to score / rank individual holdings or securities independent of the user's portfolio objective(s) i.e. the background portfolio is not the optimal portfolio produced by the OPERRA system.

#### **Section B - Clean Copy, Claims 1 to 44**

1. **(currently amended)** A method of evaluating holdings of a portfolio, the method comprising:
  - identifying the holdings that comprise the portfolio;
  - selecting a time interval comprised of successive time periods (such as a three year time interval of comprised 12 successive quarters);
  - obtaining public financial information for each of the holdings, such information

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to include that from the periodically -issued financial statements and data from the stock exchanges on which the holding's security trades;

identifying public financial metrics that are to be used in evaluating the holdings of the portfolio with such financial metrics to include selected line items in the holding's periodically-issued financial statements as well as data from the stock exchanges on which the holding's security trades such data as security prices and number of shares outstanding;

~~identifying~~ defining a set of evaluation metrics ~~that that are to be~~, some which use proprietary financial metrics of which all the proprietary financial metrics can be derived from public financial metrics, used in evaluating the holdings, wherein the evaluation metrics are comprised of the financial information and the financial metrics each evaluation metric measures the relative financial strength of holdings in a different way;

~~capturing the quantified figures (some being dollar denominated and some be share-related amounts) from public financial information and the financial data needed to calculate the values for each evaluation metric;~~

~~determining for each holding computing the value of at least some of the evaluation metrics using the quantified figures for financial metrics wherein, depending the particular evaluation metric, a higher value for a holding indicates higher relative fundamental strength (or visa versa);~~

~~stack ranking (or reverse stack ranking if a lower value indicates higher relative fundamental strength for a given evaluation metric) the holdings of the portfolio for each evaluation metric (or alternatively determining the positional penetration percentage of the holdings of the portfolio for each evaluation metric), wherein an evaluation metric ranking each evaluation metric stack ranking (or position penetration percentage) is based upon the holdings' values that have been determined for that evaluation metric;~~

~~assigning an evaluation metric positional score to each holding that has received an evaluation metric ranking stack ranking (or has received a proportional penetration percentage), wherein each evaluation metric positional score is based upon a holding's ranking stack ranking (or has received a proportional penetration percentage) in an evaluation metric; and~~

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generating an overall score for each holding of the portfolio, wherein the overall score for a holding is based upon the evaluation metrics positional scores that are assigned to that holding;

performing evaluations of a given portfolio for successive time intervals (as financial information and data for a latter time period becomes publicly available) so to determine trends over successive time intervals, including trends for the overall scores, for any and all holdings; and

determining, within the selected time for the portfolio evaluation, a series of time cumulative intra-time-interval scores for each holding to show trends and inflection points evident across successive time periods from a common base time period which the first time period of the selected time interval.

2. (original) The method of claim 1, wherein the step of generating an overall score fro a holding comprises determining an average of the evaluation metric positional scores that are assigned to that holding.
3. (original) The method of claim 1, wherein the evaluation metric positional scores that are assigned to a holding are weighted differently and wherein the step of generating an overall score for a holding comprises determining a weighted average of the evaluation metric positional scores that are assigned to that holding.
4. (original) The method of claim 1, further comprising:  
ranking the holdings of the portfolio based upon the overall scores that were assigned to each holdings; and  
generating an overall positional score for each holding, wherein a holding's overall positional score is based upon that holding's overall score ranking.
5. (canceled) The method of claim 4, further comprising:  
establishing an overall positional score threshold; and

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identifying each holding that has an overall positional score that falls below the overall positional score threshold.

6. **(currently amended)** The method of claim 1, wherein each evaluation metric is characterized by a time domain aspect and a financial attribute aspect. The time domain aspect reflects the time dimension in which the value of the evaluation metric was calculated . For the majority of "level" evaluation metrics, the value of the evaluation metric is calculated at the point in time marking the end of the selected time interval and reflect financial attributes of the holding's selected balance sheet position. "Flow" evaluation metrics are those for which the value of the evaluation metric represents the cumulative increase or decrease in dollar amount over the selected time interval for evaluation metrics and reflect financial attributes of the holding's profitability and cash consumption or generation. The majority of "change" evaluation metrics are those which reflects the degree to which the a ratio factor from balance sheet line item at the point in time marking the end of the selected time interval has increased or decreased compared to the ratio factor at the point in time marking the start of the selected time interval change.
7. **(canceled)**
8. **(original)** The method of claim 1, further comprising:  
identifying a group of evaluation metrics from the set of evaluation metrics; generating a group score for each holding of the portfolio, wherein the group score for a holding is based upon the evaluation metric positional scores that are assigned to that holding for the group of evaluation metrics that are identified.
9. **(original)** The method of claim 8, wherein the step of generating a group score for a holding comprises determining an average of the evaluation metric positional scores that are assigned to that holding for the group of identified evaluation metrics.
10. **(original)** The method of claim 8, wherein the evaluation metric positional scores that are assigned to a holding are weighted differently and wherein the step of generating a group

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score for a holding comprises determining a weighted average of the evaluation metric positional scores that are assigned to that holding for the group of identified evaluation metrics.

11. **(original)** The method of claim 8, wherein each evaluation metric is characterized by a time domain aspect and a financial attribute aspect and wherein the group is identified based upon a time domain aspect, a financial attribute aspect or both.
12. **(original)** The method of claim 8, further comprising:  
ranking the holdings of the portfolio based upon the group scores that were assigned to each holdings; and  
generating a group positional score for each holding, wherein a holding's group positional score is based upon that holding's group score ranking.
13. **(canceled)**
14. **(canceled)**
15. **(currently amended)** The method of claim 1, ~~wherein one financial metric is indicative of a holding's cumulative economic profit over a given period of time wherein some evaluation metrics are based on the proprietary financial metrics of which one such financial metric is a holding's cumulative economic profit over the selected time interval with this financial metric of not derived from P&L line items rather calculated from the absolute dollar change for specific Balance Sheet accounts over the selected time interval plus cumulative dollar amount of dividends declared or paid over the selected time interval. For example, cumulative economic profit can be calculated as the dollar amount change in total shareholder equity from the last period of the selected time interval as compared to the beginning of first time period of the selected time interval plus dividends declared or paid cumulatively for each for the time periods comprising the~~

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selected time interval less net equity capital that raised (e.g., from sales and redemption of shares) over the selected interval.

16. **(currently amended)** The method of claim 15, wherein the cumulative economic profit financial metric accounts for ~~any special charges that a holding may have taken during the given period of time.~~ special charges, non-operating losses and gains as well as other economic losses or gains that a holding has incurred whether or not all such losses and gains were reflected accurately the P&L statements for periods comprising the selected time interval.
17. **(canceled)**
18. **(canceled).**
19. **(original)** The method of claim 1, wherein the financial metrics include a plurality of financial metrics that dissect a holding's total shareholders equity at a given point in time into an organic shareholders equity financial metric and an unearned shareholders equity financial metric.
20. **(currently amended)** The method of claim 19, wherein ~~the organic shareholders equity financial metric reflects all of the business activities of the holding less cumulative dividends declared over the holding's life less net capital raised from a sale or redemption of the holding's stock.~~ some evaluation metrics are based the proprietary financial metric, organic shareholders equity, which reflects that portion of total shareholders equity generated from all operating and related activities (but not financing activities) of the holding with the organic shareholders equity financial metric calculated for the selected time interval by, among other ways, the net dollar change in retained earnings over the selected time interval less cumulative amount of dividends declared or paid by the holding over the life of the firm. Wherein unearned shareholders equity financial metric reflects that portion of total shareholders equity reflects the amount net capital that is

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raised from the sales (less repurchases) of common shares over the life of the enterprise (firm). from all financing activities of the holding.

21. (currently amended) The method of claim 1, wherein one financial metric is capable of determining an amount of cash that a holding would have had available at an end of a time interval had the holding had no change in a level of total debt and had received no net cash from a sale or redemption of the holding's stock, wherein some evaluation metrics are based on the proprietary financial metrics of which one such financial metric is organic cash, the pro forma amount cash that a holding would have had available both at the start and at the end of the time selected time interval had the holding never incurred any debt and had received no net cash from a sale or redemption of the holding's stock; one formula for calculating organic cash is all cash and cash equivalents less all debt obligations (short term and long term) less unearned shareholder equity at the end of the relevant time period. The change in organic cash over the selected time interval is a measures of capital consumption with the advantage of not relying on the accuracy of the reported net income (in the P&L statement) from which the cash flow statement emanates:
22. through 41. (all canceled)
42. (new) The method of claim 1, wherein each evaluation metric comprising the set of evaluation metrics (also called filters or filter ratios) can be computed from public financial information and from public financial data and each evaluation metric has a numerator and denominator with the denominator acting to neutralize the effect on the value of an evaluation metric that would otherwise would has occurred because fundamental size of one enterprise (represented in the portfolio by a given holding for which quantified figurers have been captured from its financial statements) differs from the size of another enterprise (represented in the portfolio by another holding) with the terms "larger" and "size", as used here, not referring the number of shares of the holding represented in the portfolio or the percent of the total worth of the portfolio represented by a holding.

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43. (new) The method of claim 1, wherein each evaluation metric positional scores for a portfolio evaluation are based upon the stack ranking of the value for a holding's evaluation metric against the values of that evaluation metric for the other holdings in the portfolio (or, alternatively, the evaluation metric positional scores for a portfolio evaluation are based upon a holding's proportional penetration percentages with proportional penetration percentage relative the range bounded the highest value and value on in portfolio for the evaluation metric.
44. (new) A method of quickly evaluating a potential new holding against a the holdings of an "on-the- shelf " portfolio, labeled the background portfolio, which does not include the new potential holding with the background portfolio have been evaluated according to the method of claim 1, the method for evaluating the potential new holding comprising:  
\_\_\_\_\_ selecting a time interval comprised of successive time periods matching that of the background portfolio;  
\_\_\_\_\_ obtaining public financial information for each of the holdings such information to include that from the periodically -issued financial statements and data from the stock exchanges on which the holding's security trades;  
\_\_\_\_\_ using public financial metrics as in the background portfolio with such financial metrics to include selected line items in the holding's periodically -issued financial statements as well as data from the stock exchanges on which the holding's security trades such data as security prices and number of shares outstanding;  
\_\_\_\_\_ using the same set of evaluation metrics as in the background portfolio some which use proprietary financial metrics of which all the proprietary financial metric be derived from public financial metrics, used in evaluating the holdings wherein each evaluation metric measures the relative financial strength holdings in a different way;  
\_\_\_\_\_ capturing the quantified figures (some being dollar denominated and some be share-related amounts) from public financial information and the financial data needed to calculate the values for each evaluation metric computing the value at least some of evaluation metrics using the quantified figures for financial metrics;



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computing the value at least some of evaluation metric based on the quantified amounts for financial metrics relevant to the numerator and denominator of each evaluation metric for the potential new holding;

inserting or "slotting" the value calculated for each evaluation metric between the next-highest and next-lowest values for the corresponding evaluation metric of the background portfolio;

interpolating the stack ranking for each evaluation metric (or alternatively interpolating the positional penetration percentage of for each evaluation metric) from the know values for evaluation metrics of holdings comprising the background portfolio;

interpolating the evaluation metric positional score (based stack ranking or proportional penetration percentage ) for each evaluation metric from the now positional scores of evaluation metrics for holdings of the background portfolio;

assigning an interpolated evaluation metric positional score for each evaluation metric based on its interpolated evaluation metric positional scores; and

generating an overall score based upon the interpolated evaluation metrics positional scores that are assigned to the new holding.

Respectively submitted , Rich Schwarz  
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